

**Outcome Evaluation: December 2008**

**Women  
in  
Recovery**

**Inmates:  
Their Children  
and Families**

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**College of Public Programs**

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**Women in Recovery**  
**Inmates: Their Children and Families**

**Program Evaluation of  
Gender-specific Substance Abuse Treatment and  
Family-focused Transition Services for Female Offenders**

Submitted to  
**Division for Substance Abuse Policy  
Arizona Governor's Office for  
Children, Youth and Families**

Funded by  
**Arizona Parents Commission on  
Drug Education and Prevention**  
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Submitted by  
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## Executive Summary

**A**lthough there are numerous success indicators for incarcerated women who completed the substance abuse counseling and parenting education programs funded by the Arizona Parents Commission, a primary concern is whether program graduates are able to remain crime-free in the community once they have been released from the Arizona prisons.

This outcome evaluation examines the recidivism records of 514 graduates of the gender-specific substance abuse counseling program, Women in Recovery (WIR), and the parenting education and child-focused family sessions in the Hope program.<sup>1</sup> Most importantly, it compares them to a matched sample of 467 women who were incarcerated during the same time period but were not program participants. Both groups of women in the sample were released from prison between January 14, 2003, and October 9, 2007, and their post-release time in the community (“time at risk” for re-offense) is similar: the average time is 16.36 months for program graduates and 16.40 months for members of the matched comparison group.

We employ two measures of recidivism. The most rigorous measure is post-release *conviction* for a new criminal offense *or parole revocation and re-incarceration*. The second, less stringent measure is *alleged new criminal offenses or alleged violations of the conditions of release* (technical parole violations).

### Positive Program Impacts

The statistical evidence clearly indicates that program graduates are less likely than comparison group members to be accused of new offenses or technical violations of parole. They are also less likely to be convicted of new offenses or to have their parole revoked and to be re-sentenced to prison time. On both recidivism measures, the *differences between program graduates and comparison group members are highly statistically significant* ( $p < .001$ ).

Approximately one-fifth of the program graduates, 19.1%, have been *convicted* of new offenses or have been re-incarcerated after parole revocation, compared to 29.3% of comparison group members. There are also important differences when we consider only convictions for new criminal offenses or focus on drug-related convictions. 9.1% of program graduates were convicted of new criminal offenses, as opposed to 17.8% of the

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<sup>1</sup> Women participate in both components and the overall program is commonly referred to as WIR.

comparison group. Only 15 of the 514 program graduates, 2.9%, have been convicted of new drug-related offenses, while 42 of the 467 comparison group members, 9.0%, have had such convictions.

### **Recidivism Intervals**

In all time intervals under study, program graduates are considerably less likely to be accused of new criminal offenses or technical parole violations. The differences are statistically significant for all intervals: for the first three post-release months, the difference is at the .01 level of significance; at six-, nine-, twelve-, and twenty-four-month intervals, the differences are highly significant ( $p < .001$ ); and for those who have been in the community for up to 60 months, the differences between program graduates and the comparison group are significant at the .05 level.

### **Multivariate Analysis**

When we examine program participation and recidivism exclusively, in bivariate analysis, the differences between program graduates and comparison group members are statistically observable, and it is clear that the program impacts women's lives after they are released from prison. However, when an array of relevant factors is examined, in multivariate analysis, the impact of program participation is not statistically observable: Other factors overshadow program effects. Interestingly, the constellation of significant factors differs depending upon whether we exam *allegations* or *convictions*.

The factors that impact post-release convictions and parole revocation/re-imprisonment include: race/ethnicity, number of prior adult felony convictions, time served, institutional risk score, and age at time of release. Those that impact allegations of criminal offenses and violation of the conditions of parole include: time served, race/ethnicity, public risk score, number of prior adult felony convictions, and marital status.

## **Part I: Post-release Allegations and Convictions**

**W**e have constructed an extensive dataset to assess recidivism (re-offending) among 514 women who successfully completed the Women in Recovery program. These women represent an 83.6% program completion rate (514 of 615 participants). The 101 participants who did not complete the program are not included in this analysis because they did not receive full program benefits and are, therefore, less distinct from the comparison group. Twenty-nine of the 101 participants who did not complete the program,

28.7 %, withdrew involuntarily due to institutional moves and unavoidable scheduling conflicts.

Rigorous analyses are possible because, in addition to the 514 program graduates, the sample includes a comparison group of 467 women who were incarcerated and released during the same time period but *did not participate in the WIR program*. This is a stringent control group that has been matched with the program graduates on numerous background and demographic factors that may contribute to inmates' success or lack of success when they return to the community. (See Appendix)

Comparison group members were matched with program graduates based on: race/ethnicity, date of birth, conviction that resulted in current prison sentence, number of prior adult felony convictions, alcohol/drug treatment needs score, mental health needs score, public risk score, and institutional risk score. They are also very similar in terms of marital status, educational attainment, number of children, and age at release from prison. The *foremost distinction* between the two groups is that one successfully completed the WIR program and the other never participated.

### **Post-release Convictions and Parole Revocations**

The most rigorous and reliable measure of recidivism has two components: (1) new convictions for criminal offenses and (2) parole revocations resulting in re-incarceration. In the first, the criminal courts have determined guilt judicially and, in the second, correctional authorities – parole officers and prison personnel – have determined guilt administratively.

As shown in Table 1, only 19.1% of program graduates are convicted of new offenses or have their parole revoked. Because WIR is a substance abuse counseling program, it is especially noteworthy that only 2.9% of its graduates have post-release convictions for drug offenses, far less than the 9.0% of the comparison group.

At the bivariate level, when the two factors of “program completion” and “recidivism” are considered, program graduates are *less likely than the comparison group to be convicted for new offenses or to have their parole revoked*, and that difference is highly statistically significant ( $p < .001$ ). Program graduates are more likely to be found guilty of technical violations of the conditions of parole (9.9%) than they are to be found guilty of new criminal offenses (9.1%). The picture regarding criminal convictions is much different for former prisoners who were not in the program: 17.8% were found guilty of new criminal offenses while 9.9% were found guilty of technical parole violations.

**Table 1. Post-release Convictions or Parole Revocations by Program Graduates and Comparison Group**

Conviction Offense Type or Technical Parole Violation*	WIR Graduates N = 514	Comparison Group N = 467	Total N = 981
Parole Revocations	9.9% (51)	9.9% (46)	9.9% (97)
Drug Offense Convictions	2.9% (15)	9.0% (42)	5.8% (57)
Violent Offense Convictions	1.2% (6)	0.6% (3)	0.9% (9)
Property Offense Convictions	3.9% (20)	5.6% (26)	4.7% (46)
Miscellaneous Convictions	1.2% (6)	2.6% (12)	1.8% (18)
Total	19.1% (98)	27.6% (129)	23.1% (227)

\* See Table 4 for offenses included in categories

**Table 2. Type of Post-release Conviction or Parole Revocation by Program Graduates and Comparison Group**

<i>p</i> < .001	Program Graduates	Comparison Group	Total
No Convictions or Revocations	75.7% (389)	70.7% (311)	75.5% (700)
Convictions or Revocations	19.1% (98)	29.3% (129)	24.5% (227)
Unknown	5.3% (27)	5.8% (27)	5.5% (54)
Total	100.0% (514)	100.0% (467)	100.0% (981)

**Conviction or Revocation Type**

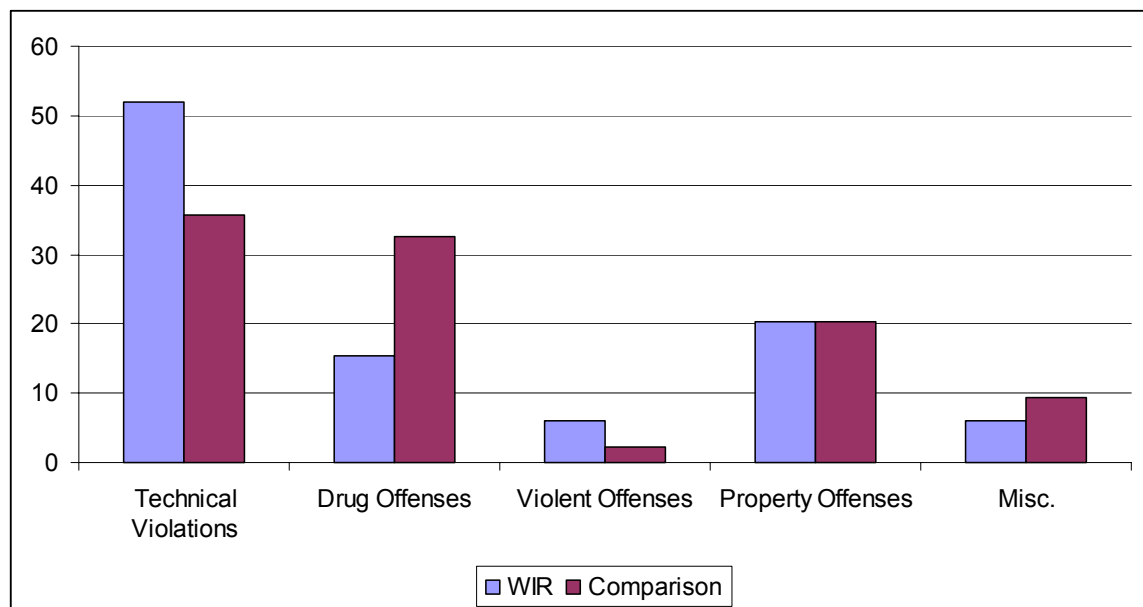
Technical Violations	51 Violations  9.9% of Program Graduates  52.0% of WIR Graduate Convictions or Revocations	46 Violations  9.9% of Comparison Group  35.7% of Comparison Group Convictions or Revocations	97 Violations  9.9% of Total Sample  42.7% of Total Convictions or Revocations
New Criminal Convictions	47 Convictions  9.1% of Program Graduates  48.0% of WIR Graduate Convictions or Revocations	83 Convictions  17.8% of Comparison Group  64.3% of Comparison Group Convictions or Revocations	130 Convictions  13.3% of Total Sample  57.3% of Total Convictions or Revocations



Of the total program graduates, fewer than one in ten, 9.1%, were convicted of new criminal offenses after completing the program and being released. 3.9% were convicted of new property offenses, 2.9% were convicted of new drug offenses, and 1.2% were convicted of violent offenses. Nine percent of the comparison group members were convicted of new drug offenses; 5.6% of new property offenses; and less than one percent, 0.6%, of violent offenses. (See Table 2)

Slightly more than half, 52%, of the program graduates who are classified as recidivists using this measure were found to have violated the conditions of their release from prison. Less than half, 48%, were convicted of new criminal offenses. One-fifth or 20.4% of those criminal convictions were for property offenses; 15.3% were for drug offenses; 6.1% were for violent offenses; and 6.1% were for miscellaneous offenses. (See Figure 1 and Tables 3 and 4)

**Figure 1. Percent of Post-release Convictions or Parole Revocations by Program Graduates and Comparison Group**



**Table 3. Type and Percent of Post-release Convictions or Parole Revocations**

Offense or Parole Violation	WIR Graduates N = 98	Comparison Group N = 129	TOTAL N = 227
<b>Violations of Release Conditions</b>	<b>52.0% (51)</b>	<b>35.7% (46)</b>	<b>42.7% (97)</b>
Abscond	42.9% (42)	27.9% (36)	34.4% (78)
Release Violation/ Unspecified	9.2% (9)	7.8% (10)	8.4% (19)
<b>Criminal Offense Convictions</b>	<b>48.0% (47)</b>	<b>64.3% (83)</b>	<b>57.3% (130)</b>

**Table 4. Type and Percent of Criminal Offense Convictions**

Criminal Offense	WIR Graduates N = 47	Comparison Group N = 83	TOTAL N = 130
<b>Violent Offenses</b>	<b>6.1% (6)</b>	<b>2.3% (3)</b>	<b>4.0% (9)</b>
Armed Robbery	1.0% (1)	0.8% (1)	0.9% (2)
Aggravated Robbery	0%	0.8% (1)	0.4% (1)
Kidnapping	1.0% (1)	0%	0.4% (1)
Child/Vulnerable Adult Abuse	2.0% (2)	0%	0.9% (2)
Misconduct/ weapons	1.0% (1)	0.8% (1)	0.9% (2)
Assault – misdemeanor	1.0% (1)	0%	0.4% (1)
<b>Drug Offenses</b>	<b>15.3% (15)</b>	<b>32.6% (42)</b>	<b>25.1% (57)</b>
Narcotic Drug Possession/Use	3.1% (3)	5.4% (7)	4.4% (10)
Narcotic Drug Transportation	0%	2.3% (3)	1.3% (3)
Dangerous Drug Violation- Possession/Use	2.0% (2)	10.1% (13)	6.6% (15)
Drug Paraphernalia – felony	5.1% (5)	4.7% (6)	4.8% (11)
Drug Paraphernalia – misdemeanor	1.0% (1)	2.3% (3)	1.8% (4)
Possession/sale Marijuana	2.0% (2)	6.2% (8)	4.4% (10)
DUI – misdemeanor	1.0% (1)	0%	0.4% (1)
Driving with Suspended License due to DUI – misdemeanor	1.0% (1)	0%	0.4% (1)
Liquor Consumption in Vehicle – misdemeanor	0%	1.6% (2)	0.9% (2)
<b>Property Offenses</b>	<b>20.4% (20)</b>	<b>20.2% (26)</b>	<b>20.3% (46)</b>
Burglary	2.0% (2)	0%	0.9% (2)
Shoplifting – felony	1.0% (1)	3.1% (4)	2.2% (5)
Unlawful use of transportation	1.0% (1)	1.6% (2)	1.3% (3)
Theft – transportation	1.0% (1)	4.7% (6)	3.1% (7)
Forgery	5.1% (5)	5.4% (7)	5.3% (12)

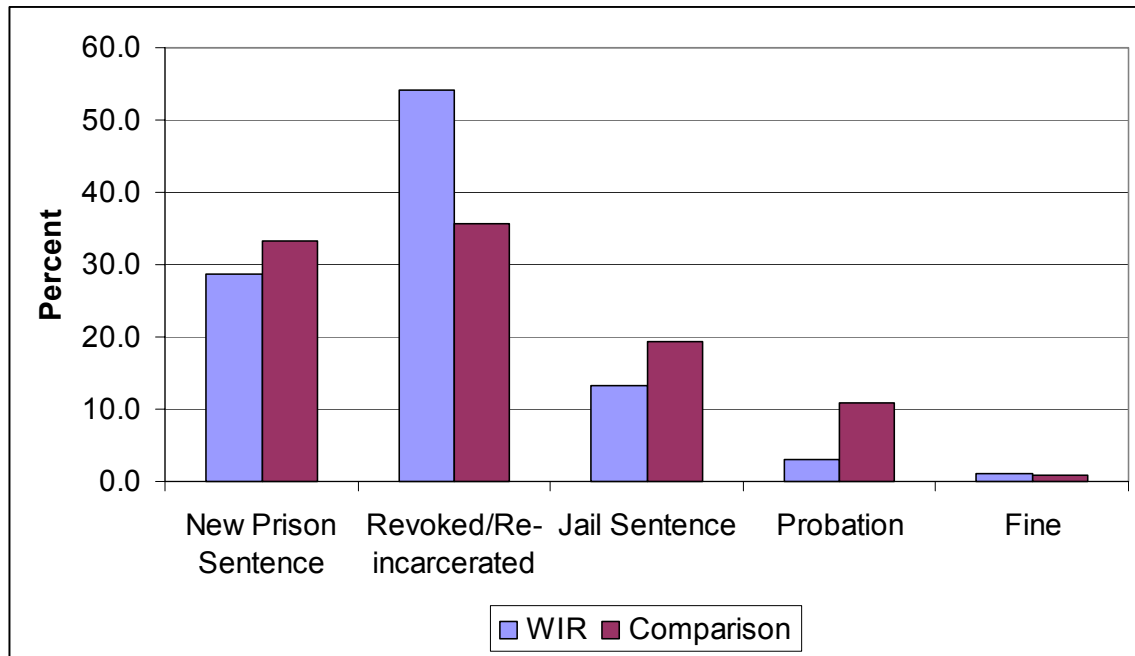
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Possession of forgery device	1.0% (1)	0.8% (1)	0.9% (2)
Fraud	1.0% (1)	0%	0.4% (1)
Theft – felony	0%	1.6% (2)	0.9% (2)
Theft – misdemeanor	2.0% (2)	0%	0.9% (2)
Issuing Bad Check	0%	0.8% (1)	0.4% (1)
Aggravated Taking Identity	5.1% (5)	1.6% (2)	.1% (7)
Criminal Damage – misdemeanor	1.0% (1)	0%	0.4% (1)
Criminal Trespass	0%	0.8% (1)	0.4% (1)
<b>Miscellaneous</b>	<b>6.1% (6)</b>	<b>9.3% (12)</b>	<b>7.9% (18)</b>
Prostitution – misdemeanor	2.0% (2)	2.3% (3)	2.2% (5)
Disorderly Conduct - misdemeanor	0%	0.8% (1)	0.4% (1)
Contribute to Delinquency/ Depend- ency of Minor – misdemeanor	1.0% (1)	0%	0.4% (1)
Interfere with Judicial Proceeding – misdemeanor	2.0% (2)	0.8% (1)	1.3% (3)
Public Sexual Indecency – misde- meanor	0%	0.8% (1)	0.4% (1)
Failure to show license/ID – misde- meanor	0%	0.8% (1)	0.4% (1)
Driving with Suspended License – misdemeanor	0%	2.3% (3)	1.3% (3)
Manifest Intent to Commit Perjury – misdemeanor	1.0% (1)	0.8% (1)	0.9% (2)
Failure to Appear	0%	0.8% (1)	0.4% (1)

### Disposition of Post-release Criminal Convictions and Parole Revocations

Re-incarceration is the most common disposition for women who have been convicted of new offenses or had their parole revoked. Program graduates are more likely than the comparison group to be re-incarcerated following revocation of parole, and comparison group members are more likely to receive new prison and jail sentences. These reflect the post-release pattern in which program graduates are more likely to violate conditions of parole and comparison group members are more likely to be convicted of new criminal offenses. The less restrictive dispositions of probation and fines are used far less often than re-incarceration.

**Figure 2. Disposition of Post-release Convictions/Parole Revocations by WIR Graduates and Comparison Group**



### **Post-release Allegations: Criminal Offenses and Technical Violations**

Although the levels of proof employed by the courts and the department of corrections are not equivalent, in both the evidence and level of proof are more rigorous than that required for a second recidivism measure based on *allegations* of new offenses or technical violations of the conditions of release. Accordingly, the proportion of program graduates and comparison group members categorized as recidivists based on allegations is greater than the proportion based on criminal convictions or corrections system decisions to revoke parole and re-incarcerate.

Most importantly for this evaluation, program graduates are *less likely* than comparison group members to be accused of new offenses or parole violations, and *the differences between the two groups are highly statistically significant* ( $p < .001$ ). Program graduates are more likely to allegedly commit technical violations of the conditions of parole (14.6%) than any type of new criminal offense. Of the total program graduates, only 5.3% were accused of new drug offenses; similarly, 5.1% were allegedly involved in property offenses; and 2.0% allegedly committed violent offenses. Eleven percent of the comparison group members were accused of new drug offenses; 8.6% of new property offenses; and 1.3% percent of violent offenses. (See Tables 5, 6 and 7)

**Table 5. Type of Alleged Offenses and Technical Parole Violations by Program Graduates and Comparison Group Members**

<b>Alleged Offense Type or Technical Parole Violation</b>	<b>WIR Graduates N = 514</b>	<b>Comparison Group N = 467</b>	<b>Total N = 981</b>
Technical Violations of Parole	14.6% (75)	15.9% (74)	15.2% (149)
Alleged Drug Offenses	5.3% (27)	11.3% (53)	8.2% (80)
Alleged Violent Offenses	2.0% (10)	1.3% (6)	1.6% (16)
Alleged Property Offenses	5.1% (26)	8.6% (40)	6.7% (66)
Alleged Miscellaneous Offenses	1.8% (9)	3.2% (15)	2.5% (24)
Total	28.6% (147)	40.3% (188)	34.1% (335)

**Table 6. Program Graduate and Comparison Group Post-release Violations: Criminal Allegations and Technical Violations**

p<.001	<b>Program Graduates</b>	<b>Comparison Group</b>	<b>Total</b>
<b>No Violations</b>	367 71.4%	279 58.7%	646 65.9%
<b>Violations</b>	147 28.6%	188 40.3%	335 34.1%
<b>Total</b>	514 100.0%	467 100.0%	981 100.0%

**Violation Type** *p*<.05

<b>Technical Violations</b>	78  15.2% of Program Graduates  53.1% of Program Graduates Violations	76  16.3% of Comparison Group  40.4% of Comparison Group Violations	154  25.1% of sample  46.0% of Total Violations
<b>New Criminal Allegations</b>	69  13.4% of Program Graduates  46.9% of Program Graduate Violations	112  24.0% of Comparison Group  59.6% of Comparison Group Violations	181  18.5% of Total Sample  54.0% of Total Violations

**Table 7. Type and Percent of Post-release Allegations:  
Alleged Offenses and Technical Violations**

<b>Type of Post-release Violations</b>	<b>WIR Graduates  N = 147</b>	<b>Comparison Group  N = 188</b>	<b>TOTAL  N = 335</b>
<b>Violations of Release Conditions (Technical Violations)</b>	<b>51.0% (75)</b>	<b>39.4% (74)</b>	<b>44.5% (149)</b>
Abscond	40.8% (60)	29.8% (56)	34.6% (116)
Release Violation	10.2% (15)	9.6% (18)	9.9% (33)
<b>Criminal Allegations</b>	<b>49.0% (72)</b>	<b>60.6% (114)</b>	<b>55.5% (186)</b>
<b>Violent Offenses</b>	<b>6.8% (10)</b>	<b>3.2% (6)</b>	<b>4.8% (16)</b>
Armed Robbery	0.5% (1)	0.7% (1)	0.6% (2)
Aggravated Robbery	0%	1.1% (2)	0.6% (2)
Kidnapping	0.7% (1)	0%	0.3% (1)
Child/Vulnerable Adult Abuse	1.4% (2)	0.5% (1)	0.9% (3)
Misconduct/ weapons	1.4% (2)	0.5% (1)	0.9% (3)
Assault – misdemeanor	2.7% (4)	0.5% (1)	1.5% (5)
<b>Drug Offenses</b>	<b>18.4% (27)</b>	<b>28.2% (53)</b>	<b>23.9% (80)</b>
Narcotic Drug Possession/Use	2.7% (4)	4.3% (8)	3.6% (12)
Narcotic Drug Transportation	0%	2.1% (4)	1.2% (4)
Dangerous Drug Violation – Possession/Use	4.8% (7)	8.5% (16)	6.9% (23)
Drug Paraphernalia – felony	4.1% (6)	4.8% (9)	4.5% (15)
Drug Paraphernalia – misdemeanor	2.0% (3)	2.7% (5)	2.4% (8)
Possession/sale Marijuana	2.7% (4)	4.8% (9)	3.9% (13)
DUI – misdemeanor	1.4% (2)	0%	0.6% (2)
Driving with Suspended License due to DUI – misdemeanor	0.7% (1)	0%	0.3% (1)
Liquor Consumption in Vehicle – misdemeanor	0%	1.1% (2)	0.6% (2)
Theft – felony	0%	2.1% (4)	1.2% (4)
Theft – misdemeanor	1.4% (2)	0%	0.6% (2)
Aggravated Taking Identity	4.1% (6)	2.7% (5)	3.3% (11)
Issuing Bad Check	0%	1.6% (3)	0.9% (3)
Criminal Damage – misdemeanor	1.4% (2)	0.5% (1)	0.9% (3)
<b>Property Offenses</b>	<b>17.7% (26)</b>	<b>21.3% (40)</b>	<b>19.7% (66)</b>
Burglary	1.4% (2)	0.5% (1)	0.9% (3)
Shoplifting – felony	0.7% (1)	2.1% (4)	1.5% (5)
Shoplifting – misdemeanor	0.7% (1)	0.5% (1)	0.6% (2)
Unlawful use of transportation	1.4% (2)	2.1% (4)	1.8% (6)
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	<b>WIR Graduates</b>	<b>Comparison Group</b>	<b>Total</b>
Theft – transportation	0.7% (1)	3.7% (7)	2.4% (8)
Forgery	4.8% (7)	4.8% (9)	4.8% (16)
Possession of forgery device	0.7% (1)	0.5% (1)	0.6% (2)
Fraud	0.7% (1)	0%	0.3% (1)
Theft – felony	0%	2.1% (4)	1.2% (4)
Theft – misdemeanor	1.4% (2)	0%	0.6% (2)
Aggravated Taking Identity	4.1% (6)	2.7% (5)	3.3% (11)
Issuing Bad Check	0%	1.6% (3)	0.9% (3)
Criminal Damage – misdemeanor	1.4% (2)	0.5% (1)	0.9% (3)
<b>Miscellaneous</b>	<b>6.1% (9)</b>	<b>8.0% (15)</b>	<b>7.2% (24)</b>
Prostitution – misdemeanor	2.7% (4)	1.6% (3)	2.1% (7)
Criminal Trespass	0%	0.5% (1)	0.3% (1)
Disorderly Conduct - misde- meanor	0.7% (1)	1.1% (2)	0.9% (3)
Contribute to Delinquency/ De- pendency of Minor – misde- meanor	0.7% (1)	0%	0.3% (1)
Interfere with Judicial Proceeding – misdemeanor	1.4% (2)	0.5% (1)	0.9% (3)
Public Sexual Indecency – mis- demeanor	0%	0.5% (1)	0.3% (1)
Failure to show license/ID – mis- demeanor	0%	0.5% (1)	0.3% (1)
Driving with Suspended License – misdemeanor	0%	2.1% (4)	1.2% (4)
Manifest Intent to Commit Perjury – misdemeanor	0.7% (1)	0.5% (1)	0.6% (2)
Failure to Appear	0%	0.5% (1)	0.3% (1)

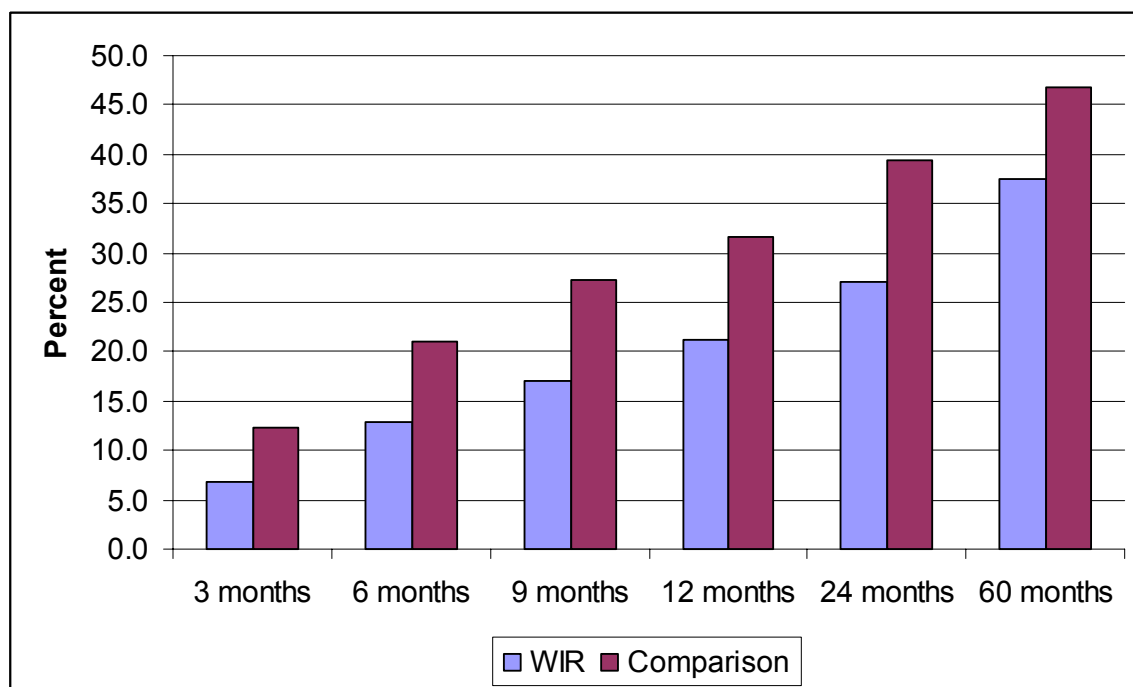
### **Time to Accusations of New Criminal Offenses and Technical Parole Violations**

To assess differences in recidivism rates, it is essential to maintain comparable time intervals for those whose records are being studied. We examine the extent of re-offending within six intervals that mark the length of time individuals in each specific analysis have been out of prison and “at risk for re-offending” in the community: three, six, nine, twelve, twenty-four, and sixty months.

In all of these time intervals, program graduates are considerably less likely to be accused of new offenses or technical parole violations, and at each juncture the differences are statistically significant. For the first three-month interval after release, the difference is moderately significant at the .01 level (6.8% for program graduates compared to 12.4% for comparison group members). The differences are highly significant ( $p < .001$ )

at the next four intervals: six months (12.8% and 21.0%), nine months (17.0% and 27.2%), twelve months (21.3% and 31.6%), and twenty-four months (27.1% and 39.4%). For those who have been in the community up to 60 months, the differences between program graduates (37.5%) and the comparison group (46.8%) are significant at the .05 level. See Figure 3 for the percent of program graduates and comparison group members who are arrested or accused of parole violations during each time interval.

**Figure 3. Alleged Offenses or Parole Violations for Six “At Risk” Intervals by WIR Graduates and Comparison Group Members**



## Part II. Multivariate Analyses

The extensive law enforcement (DPS) and corrections (ADC) records in our dataset make it possible to conduct multivariate analyses that examine the statistical relationships among many factors simultaneously. We analyze the relationships between the recidivism measures (post-release offense convictions or parole revocations *and* alleged new criminal offenses or technical violations of parole) and an array of factors that have potential to impact these outcome measures.



While bivariate analyses provide important insights into the statistical strength and significance of the impact of WIR program participation on recidivism, multivariate analyses control for or “hold constant” additional substantively meaningful variables. The factors included in the analyses are:

- Offense resulting in most recent commitment to ADC
- ADC sentence length
- Time served prior to release
- Number of prior adult felony convictions
- Whether offense “committed to support habit”
- Whether committing offense was “under the influence”
- Institutional risk score
- Public risk score
- Number of children
- Race/ethnicity
- Age at release
- Marital status
- GED or high school completion
- Program graduate or comparison group member

In both the analysis of post-release convictions and of alleged offenses/ violations, the impact of program participation is not statistically observable when considered jointly with other factors that have a more statistically powerful impact on recidivism. The impact of being a program graduate is greatly overshadowed by women’s race and ethnicity, the number of prior felony convictions, the amount of time served prior to release, ADC’s assessment of institutional risk, and age at release from prison. (See Table 8)

Number of prior felony convictions (as an adult) is a powerful predictor of recidivism: for each prior felony conviction, the likelihood of conviction for a new offense or parole revocation increases 123%. Two additional criminal justice system-related factors are important, but less powerful: women who serve longer time before release and those with lower institutional risk scores are less likely to recidivate. (See p.19 for further discussion)

None of these offense- or prison-related factors is as strongly related to post-release conviction or parole revocation as is race/ethnicity. As a group, African American and Native American women are 2.2 times more likely to have a post-release conviction or parole revocation than are white women as a group. It is a striking and complex finding: when 13 potentially predictive factors are assessed, race/ethnicity has the strongest association with recidivism.

Greater percentages of African American and Native American *program graduates* are convicted of new offenses or have their parole revoked than are either their white or Latina counterparts: 28% of African Americans and 36% of Native Americans, compared to 22% of Latinas and 17% of white program graduates. Based on this important outcome measure, the WIR program is less successful for Native American and African American women than for other participants.

The multivariate findings indicate that, regardless of whether or not they completed the WIR program, African American and Native American women are more likely to recidivate. This undoubtedly reflects the confluence of many facets of their experiences within the criminal justice system and when they reenter the community outside prison.

**Table 8. Multivariate Analysis of Factors Impacting Post-release Convictions or Parole Revocations**

<b>Variable</b>	<b>Strength and nature of association</b>	<b>Level of statistical significance</b>
Race/ethnicity	As a group, African American and Native American women are 2.2 times more likely to have a post-release conviction or parole revocation than are white women as a group	.001
Number of prior adult felony convictions	The likelihood of a post-release conviction or parole violation increases 123% with each prior felony	.001
Time served prior to release	The likelihood of a post-release conviction or parole violation decreases by 81% with each year served	.01
Institutional risk score	Those with a moderate or high institutional risk score are 1.5 times more likely than those with a minimal or no risk score to have a post-release conviction or parole revocation	.05
Age at time of release	Women aged 40 years or more when released are 54% less likely to have a post-release conviction or parole revocation than those aged 30 years or younger	.05

Table 9 details the five factors that have greatest impact on whether or not, after they are released from prison, program graduates and comparison group members are *accused of* new criminal offenses or technical parole violations. Factors related to both the women's criminal justice histories and their demographic characteristics are important correlates of post-release allegations. Those whom correctional officials classify as constituting greater risk to public safety, those with more prior adult felony convictions,

and those who served less time prior to their release are more likely to be accused of new offenses or to have their parole revoked.

The two statistically influential demographic factors are race/ethnicity and marital status. As a group, African American and Native American women are 1.9 times more likely to have post-release alleged offenses or parole violations than are white women as a group. The impact of marital status is less pronounced, but statistically significant. As a group, separated, divorced, and widowed women are 65% less likely than single women to have a post-release alleged offense or parole violation.

**Table 9. Multivariate Analysis of Factors Impacting Alleged Post-release Offenses or Parole Violations**

<b>Variable</b>	<b>Strength and nature of association</b>	<b>Level of statistical significance</b>
Time served prior to release	The likelihood of a post-release alleged offense or parole violation decreases 81% with each additional year served	.001
Race/ethnicity	As a group, African American and Native American women are 1.9 times more likely to have a post-release alleged offense or parole violation than are white women as a group	.01
Public Risk Score	Those with a moderate or high public risk score are 1.5 times more likely than those with a minimal or no public risk score to have a post-release alleged offense or parole violation	.05
Number of prior adult felony convictions	The likelihood of a post-release alleged offense or parole violation increases 111% with each prior felony	.05
Marital Status	As a group, separated, divorced, and widowed women are 65% less likely than single women to have a post-release alleged offense or parole violation	.05

### **Implications of Recidivism Analysis**

Especially when we focus exclusively on the bivariate relationship between program completion and recidivism, there is ample evidence of the WIR program's beneficial influence in the lives of previously incarcerated women and, indirectly, the lives of their children. Program graduates are less likely than comparison group members to be accused of new offenses or technical violations of parole. They are also less likely to be convicted of new offenses or to have their parole revoked and to be re-sentenced to prison time.

On both recidivism measures, the *differences between program graduates and comparison group members are highly statistically significant* ( $p < .001$ ). Statistically significant differences between the two groups are also evident at all six time intervals examined; at this level of analysis the program appears to exert a positive effect on graduates' likelihood of remaining in the community, both short-term and long-term.

When the analysis extends to factors beyond the program's purview, the complexity of women's lives upon reentry into the community is evident. Race and age are prominent: The greater likelihood of post-release conviction and parole revocation among women who are African American, Native American or 30-years-old or younger highlights the need for the intensive and wide-ranging reentry services envisioned by the WIR program. The impact of race is similarly, if less strongly, evident in the likelihood of alleged new offenses and technical parole violations. Marital status is also statistically significant in this analysis, with single women more vulnerable to failure.

The research findings also suggest avenues for heightened attention to the needs of specific groups of women within the correctional system. In terms of the most rigorous recidivism measure of new convictions and parole revocations/re-incarceration, the prison program and community reentry services appear to have less beneficial results for women with more adult felony convictions and those who have served less time.

Of particular interest is the finding that those who have completed the WIR program are more likely than others to have their paroles revoked for technical violations and to be re-incarcerated. 68% of program graduates accused of technical parole violations have their parole revoked, compared to 62% of others. This suggests the possibility of heightened expectations and surveillance as well as more severe responses to technical violations by program graduates. The data analyses for these 981 women also suggest the wisdom of gathering systematic data on the dynamics of the reentry process, including housing, job training, employment, proportion of time employed since release, income, and childcare support. This crucial information would enhance the matrix of complex factors examined in this evaluation and provide greater insight into programmatic success and limitations.

### **Matched Comparison Limitation**

As is evident in the Appendix, the program graduates and comparison group of non-participants are extremely well matched in terms of race/ethnicity, age at time of release from prison, marital status, educational attainment, number of children, offense resulting

in most recent commitment to ADC, and whether or not the offense was committed under the influence of drugs/alcohol or was committed to support a drug habit.

The match between the two groups is less compelling in terms of three important factors: public risk score, institutional risk score, and length of sentence. Comparison group members are far more likely than program graduates to have moderate or high public and institutional risk scores (48.4% compared to 20.1% on both measures). As a group, the program graduates have longer sentences: 50.4% have sentences of 37 months or more, as opposed to 23.8% of comparison group members.

These differences reflect the program's eligibility criteria and selection process. At the time of the research, any female inmate could apply to the program but, in order to maximize the potential benefits of involvement, individuals with lower security levels were more likely to be selected. Two logistical factors contribute to program graduates having longer sentences and having served more time prior to release: (1) to qualify and have sufficient time to complete the program, applicants at the larger institution, Perryville, had to have 15 to 18 months remaining prior to release; and (2) willingness to volunteer may be influenced by length of sentence and length of time served.

Although the differences are unavoidable, they are consequential for the research findings: most importantly, they impact the multivariate findings and may dilute the extent to which graduating from the program is a statistically significant factor in predicting reentry success. Higher public and institutional risk scores and longer periods of time served prior to release both are statistically significant.

### **Multiple Measures of Success**

This statistical portrait of women's post-release offense records provides important information, but it cannot capture the program's full impact. While this analysis and report focus on the statistically observable outcomes of the WIR/Hope program, our initial in-depth observations and interviews suggested additional measures of program success. Fifteen months of research within the prisons revealed the program's depth and potentially transformative power for the overwhelming majority of women who participated. The substance abuse counseling groups provided the professional guidance, structure and impetus for women to confront the experiences and life circumstances that contributed to their imprisonment. The education-based family sessions demonstrated women's capacity to learn and to gain the knowledge, skills, experience, and resources needed to maximize their opportunities for successful reentry.

## Appendix

**Table A. WIR Graduate and Comparison Group Characteristics**

	<b>WIR Graduates</b>	<b>Comparison Group</b>	<b>TOTAL</b>
<b>RACE</b>			
White	63.2% (325)	58.0% (271)	60.8% (596)
Latina/Hispanic	20.2% (104)	23.6% (110)	21.8% (214)
African American	11.1% (57)	12.6% (59)	11.8% (116)
Native American	4.5% (23)	5.1% (24)	4.8% (47)
Asian	0.8% (4)	0.4% (2)	0.6% (6)
Other	0.2% (1)	0.2% (1)	0.2% (2)
<b>Age at Release</b>			
30 years or younger	32.7% (168)	37.5% (175)	35.0% (343)
31 – 39 years	38.9% (200)	40.7% (190)	39.8% (390)
40 years or older	28.4% (146)	21.8% (102)	25.3% (248)
<b>Marital Status</b>			
Single	56.2% (286)	50.9% (193)	53.9% (479)
Married	19.4% (99)	23.5% (89)	21.2% (188)
Separated	5.5% (28)	7.3% (34)	6.4% (62)
Divorced	15.9% (81)	14.9% (69)	15.4% (150)
Widowed	2.9% (15)	1.9% (9)	2.5% (24)
<b>GED or High School Earned</b>			
Yes	44.1% (202)	41.3% (177)	42.7% (379)
No	55.9% (256)	58.7% (252)	57.3% (508)

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<b>Number of Children</b>			
0	28.1% (259)	30.6% (116)	29.2% (259)
1-2	38.7% (197)	32.7% (124)	36.1% (321)
3 or more	33.2% (169)	36.7% (139)	34.7% (308)
<b>Offense Type – ADC Commitment</b>			
Drug Offenses	41.1% (211)	43.7% (204)	42.3% (415)
Property Offenses	48.2% (248)	44.8% (209)	46.6% (457)
Violent Offenses	10.7% (55)	11.6% (54)	11.1% (109)
<b>Crime Committed Under the Influence</b>			
Yes	67.2% (167)	67.0% (308)	67.1% (650)
No	32.8% (167)	33.0% (152)	32.9% (319)
<b>Crime Committed to Support Drug Habit</b>			
Yes	51.9% (264)	58.9% (271)	55.2% (535)
No	48.1% (245)	41.1% (189)	44.8% (434)
<b>Institutional Risk Score</b>			
Minimal/No Risk	79.9% (402)	51.6% (220)	67.0% (625)
Moderate/High	20.1% (102)	48.4% (206)	33.0% (308)
<b>Public Risk Score</b>			
Minimal/No Risk	79.9% (405)	51.6% (220)	67.0% (625)
Moderate/High	20.1% (102)	48.4% (206)	33.0% (308)
<b>Length of Sentence</b>			
12 months or less	0.2% (1)	6.0% (28)	3.0% (29)
13 – 36 months	59.3% (305)	70.2% (328)	64.5% (633)
37 – 60 months	27.2% (140)	15.2% (71)	21.5% (211)
More than 60 months	13.2% (68)	8.6% (40)	11.0% (108)